

TITLE

THIN NANOMETER-CONTROLLED POLYMER FILM GRADIENT

ABSTRACT

This invention relates to a process that uses Surface Atom Transfer Radical Polymerization (SATRP) to grow thin polyethylene glycol alkyl acrylate (PEGAA) polymer film gradients on the moiety accepting surface of a substrate. This invention also relates to a method for producing thin PEGAA polymer film gradients having specific surface functionalities, a thickness ranging from about 0.5 nm to about 5000 nm, and a polymer chain density ranging from 0.1 to 100 % surface coverage.